CLINICAL NOTES AND CASE REPORTS

A SELF-RELEASED LOCK-BOLT FOR FRACTURES OF THE FEMORAL NECK*

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A DEVICE which locks into the head fragment so firmly that the reduced fractured surfaces of the neck may be impacted securely and permanently together, is much to be desired.

One of the writers, Doctor Morrison, has invented a device which has proved so satisfactory that this preliminary report is in order.

This instrument is a hollow bolt of stainless steel, three and one-half inches long and one-quarter inch in diameter. The penetrating end has a slot three-quarters inch long and one-eighth inch wide, holding two levers hinged on a single cross-pin. While the bolt is being inserted, these locking levers lie completely within the slot. When the bolt is in place, the locking levers are pushed out by a threaded pin one-eighth inch in diameter, which traverses the hollow in the bolt to a position transverse to the long axis of the bolt. The protruding end of this pin has a knob by which it may be easily turned. The protruding end of the bolt is fitted with a loose-fitting nut. When the lock levers are out, and this nut is turned up tight against the cortex, the reduced surfaces are held so firmly together that no cast, splint or other external fixation appliance is necessary. The patient may be freely turned in bed, and may be

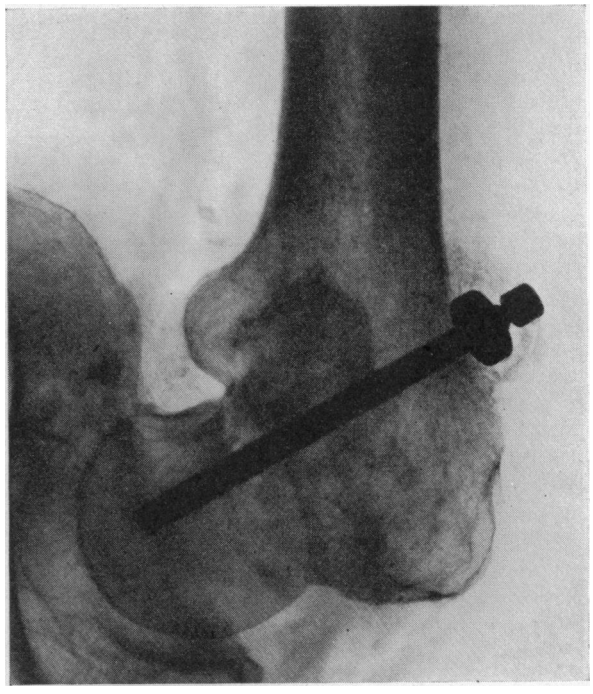

Fig. 2 (Case O. W.). — Bolt transfixing femoral neck. Transverse members are not seen, as they are in the A. P. plane.

* From the Orthopedic Service of the San Mateo Community Hospital, San Mateo.

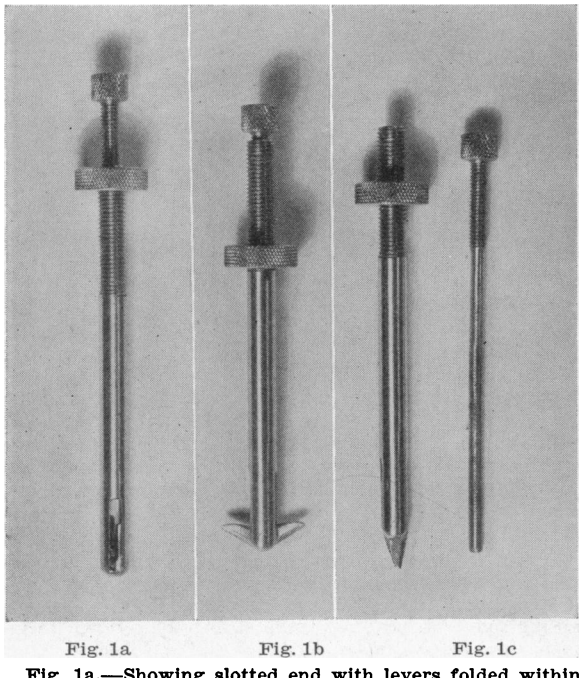

Fig. 1a Fig. 1b Fig. 1c

Fig. 1a.—Showing slotted end with levers folded within slot. Bolt is inserted in this position.

Fig. 1b.—Bolt with internal member screwed down, which forces levers out of shaft and locks them in a transverse position.

Fig. 1c.—Internal member has been withdrawn. The levers are folded over the end of the bolt, as in extraction of bolt.

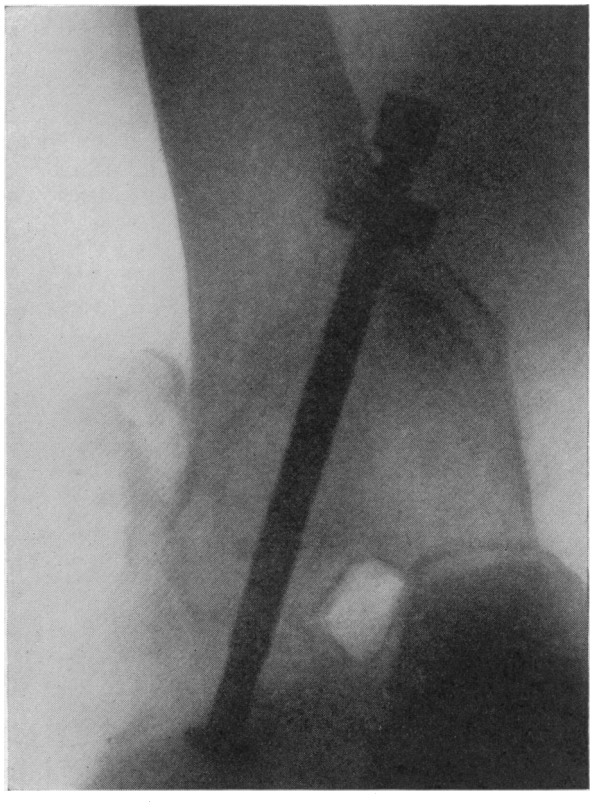

Fig. 3 (Case O. W.). — Lateral, showing bolt in femoral neck with levers in transverse position. (The apparent bending of the bolt is caused by the use of a curved cassette in taking this picture.)

gotten up on crutches as soon as the wound has healed.

When the bolt is to be withdrawn, the center pin is unscrewed and the locking levers rotate back beyond the end of the bolt and flush with its surface, thus offering no possible obstacle to withdrawal.

Our procedure is to reduce the fracture under local anesthesia by Leadbetter's maneuver, check reduction by heel-palm test, and confirm by A-P and lateral x-rays. These are taken with four Michel clips, so placed in the skin about the hip that the clips and their shadows in the x-rays enable us to aim the one-quarter inch drill used to make way for the lock-bolt. We expose the trochanter for the drill under local anesthesia. X-rays check the position of the drill, which is withdrawn and the bolt immediately inserted. The bolt is locked and tightened as above described.

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DOUBLE UTERUS WITH FEATURES OF SPECIAL INTEREST

REPORT OF CASE

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THE case of double uterus here reported represents failure of fusion of the Mullerian ducts from the pelvic outlet upward, associated with partial obstruction of the introitus. It is remarkable that the patient was not aware of any pelvic abnormality, though she had been married for eleven years.

Another feature is the development of fibromyomata in both uteri, with resultant pressure symptoms. The anatomical features are similar to the case reported by Dr. Joseph B. De Lee, except that bilateral fibromyoma were present instead of a pregnancy.

REPORT OF CASE

Mrs. F. H. R., white, age forty-three. The family history was irrelevant. The patient had the usual diseases of childhood, and has since had the following: alveolar abscess, renal calculus, aet. thirty-one. She had tonsillectomy and thyroidectomy.

Menstruation began at twelve. She had regular periods of three to five days' duration, with twenty-eight-day interval. The flow has become more profuse in recent years, without associated pain or headache. During the past year, menstruation is described as very profuse and followed by weakness and pallor.

She was married at the age of thirty-two. Due to fear of childbirth, and a desire to lead an active life outside her home, she had abstained entirely from sexual relations and, consequently, there have been no pregnancies.

Generalized abdominal pain, associated with distention and excessive amounts of gas, came on one month previous to admission. This was most severe two to five hours after meals, and also kept her awake at night. Fasting and the use of enemas gave a degree of relief, and she had fasted three days when she was admitted. There had been swelling of the ankles, which started at the age of sixteen, and this swelling was more marked in recent years. Recently she has slept with the foot of her bed elevated to reduce the swelling. Pain and stiffness of joints of fingers had been noted. Nocturia once had become a usual occurrence.

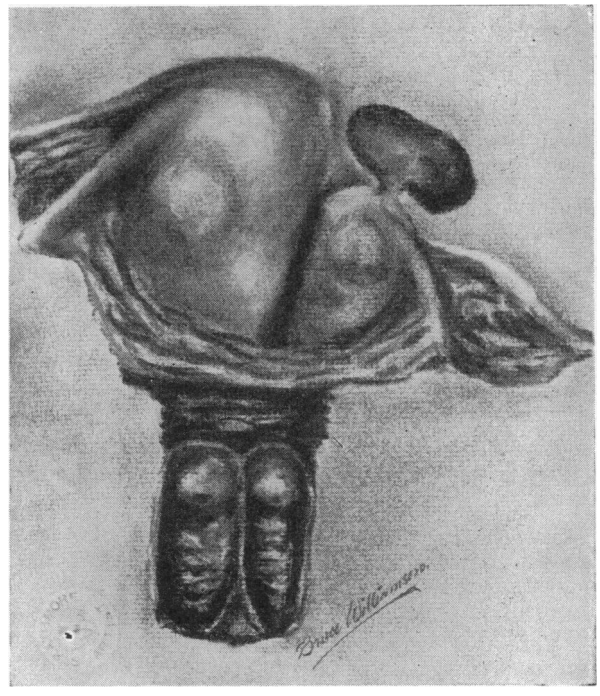

Fig. 1.—Diagrammatic drawing showing anatomic features and relationships.

Examination showed a pale but well-nourished white female. There is a transverse scar on the neck. The findings of the heart and lungs were essentially normal. Blood pressure was 130/75. Upper abdominal findings were normal, but there was hyperesthesia and resistance in the lower abdomen, which was more marked on the right. A mass seven centimeters across could be felt in the lower right quadrant. There was puffiness of the ankles. No swelling of the joints of fingers could be detected. Vaginal examination was unsuccessful, because the introitus was so small that one finger could not be introduced without pain. No other abnormality of the external genitalia was noted at this time. Bimanual examination was done with the finger in the rectum. A mass was outlined to the left which was interpreted to be the uterus displaced to that side. On the right was a larger mass, which was quite hard. There was no induration of tissues, but the masses palpated were firm and irregular. It was not determined whether the two masses were attached or separate.

Blood count was reported as follows: Hemoglobin, 50 per cent; red cells, 3,380,000; white cells, 5,800. The differential showed a lymphocytosis. The urine findings were normal.

Operation.—The patient entered the hospital August 12, 1935, and laparotomy was performed the following day. Midline incision above the pubis was made, and exploration revealed a large uterus lying in the right side of the pelvis. On the left another enlarged uterus with fibroid pedunculated from the fundus was found. The uteri were not united above the cervix, and a strip of peritoneum passed from the bladder to the cul-de-sac between them. Each uterus had one round ligament, and one fallopian tube with normal ovaries in relation to the tubes.

The procedure consisted of removal of the fibroid from the left uterus to improve exposure, followed by removal of that uterus, leaving the cervix *in situ*. The large uterus on the right was next removed, leaving the cervix. Fallopian tubes and ovaries were left in both sides. After careful ligation of uterine and ovarian vessels, the round ligaments were sutured into the stump of the cervix on each side, and the bladder fold of peritoneum was sutured over the raw areas. Appendectomy was done, after which the abdomen was closed by my usual technique. Permission to do plastic on the introitus had been denied, so it was not done at this time.